UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, DC 20233-0001

MASTER FILE

June 20, 2001

DSSD CENSUS 2000 PROCEDURES AND OPERATIONS MEMORANDUM SERIES # L- 8

MEMORANDUM FOR Ruth Ann Killion
Chief, Planning, Research, and Evaluation Division

From: Howard Hogan
Chief, Decennial Statistical Studies Division

Subject: Study Plan for A7.b: Census 2000 Mail Return Rates

Attached is the study plan for A7.b: Census 2000 Mail Return Rates. The Census 2000 Evaluation Program quality assurance process was applied to the methodology development and the study plan review process. The study plan is sound and appropriate for completeness and accuracy, and it answers its intended category questions as appropriate.

If you have questions about this study plan, please contact Hebert F. Stackhouse on 301-457- 8026.

Attachment (A7.b: Census 2000 Mail Return Rates)

cc:
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CENSUS 2000 OPERATIONAL SUMMARY
STUDY PLAN A.7.b

I. NAME OF OPERATION

Study of Census 2000 Mail Return Rates

II. PROJECT MANAGER

Herbert F. Stackhouse (DSSD)
(301) 457-8026
herbert.f.stackhouse@census.gov

III. OPERATIONAL BACKGROUND

A. Past Censuses and Tests

1. 1990 Census

In the 1990 Census, the United States Postal Service (USPS) was the primary vehicle for delivering census questionnaires. Based on a master address list, the Census Bureau mailed questionnaires to about 86.2 million housing units in areas designated as being mailout/mailback. Occupants were asked to complete the forms and mail them back in the provided postage paid envelope. In areas designated as update/leave, enumerators visited approximately 10.3 million housing units, verified addresses, and left questionnaires for occupants to complete and mail back in the provided postage paid envelope.

In the 1990 Census, both a questionnaire and a mail reminder card were delivered to all housing units in the mailout/mailback universe. The reminder card was delivered on March 30, approximately seven days after the questionnaire mailout. Census Day was officially April 1.

The mail return rate was defined as the ratio of the number of households returning a census questionnaire by mail to the total number of occupied housing units that received a census questionnaire delivered by mail or by a census enumerator. For the 1990 Census the overall mail return rate was approximately 74.1 percent.

2. Census 2000 Dress Rehearsal

The Census 2000 Dress Rehearsal was conducted in three areas: Columbia, South Carolina, and 11 surrounding counties, Menominee County, Wisconsin, including the Menominee American Indian Reservation, and Sacramento, California. Each site was selected because of its demographic and geographic characteristics to provide experience with some of the expected Census 2000 environments. The South Carolina site was a mixture of mailout/mailback and update/leave addresses, the Menominee site was entirely update/leave, and the Sacramento site was entirely mailout/mailback.

There were four components of mailout/mailback delivery: an advance letter, an initial questionnaire, a reminder card, and a "blanket" replacement questionnaire (mailed to all addresses). These items used first-class postage and were distributed by the USPS as part of the regular postal routes. The advance letter was mailed to each address between March 24 and 27, 1998. The initial questionnaire was mailed between March 28 and 31. The reminder card was sent to housing units between April 3 and 6. Replacement questionnaires were mailed between April 15 and 17. Census Day was officially April 18.

The update/leave methodology involved Census Bureau enumerators delivering questionnaires at the same time they updated maps and the list of addresses. Update/leave delivery of questionnaires took place between March 14 and April 10, 1998. In ZIP codes that consisted entirely of update/leave housing units, the USPS delivered an advance letter to "postal patrons" using third-class postage.

Under both methodologies, respondents were asked to mail back their questionnaires in provided postage paid envelopes.

Short and long form questionnaires were included in both delivery methodologies. Every housing unit received either a short or a long form. The long form sampling rate for the dress rehearsal varied according to site.

Return rate was defined to include in its numerator the number of occupied housing units in the mailback universe that returned a questionnaire that was not blank. The return rate denominator included the number of occupied housing units in the mailback universe that were either mailed a questionnaire or - in update/leave areas - received one delivered by a census enumerator.

The mail return rates for the Dress Rehearsal were:

Site	Mail Return Rate		
	Short form	Long form	Total
South Carolina	66.7 %	54.4 %	64.8 %
Sacramento	63.1 %	47.7 %	60.6 %
Menominee	59.1 %	48.3 %	57.6 %

B. Census 2000

In Census 2000, the questionnaire mailout/mailback system was the primary means of census-taking. Cities, towns, and suburban areas with city-style addresses (house number and street name) as well as rural areas where city-style addresses are used for mail delivery comprised the mailout/mailback areas. Update/leave areas consisted of addresses that are predominantly not city-style. Census enumerators delivered addressed questionnaires to update/leave housing units. Update/leave enumerators also made any necessary corrections or additions to Census maps and address lists as they delivered the questionnaires. In both delivery methodologies, the housing units were provided with first-class postage paid envelopes for returning their questionnaires.

1. Types of Mailback Questionnaires

Census 2000 included two types of questionnaires for mailback:

a. A short form was delivered to approximately 83 percent of all housing units. This form allowed the respondent to list up to 12 household members. It provided space for reporting the basic population and housing data (i.e. name, relationship, age, sex, race, ethnicity, tenure) for up to six household members and the housing unit.

b. A long form was delivered to a sample – approximately 17 percent – of all housing units. This form allowed the respondent to list up to 12 household members. It included all of the short form questions, as well as additional questions on the characteristics for up to six household members and the housing unit.

There is one difference between the mailout/mailback questionnaire and the update/leave questionnaire. The update/leave questionnaire gave the respondent the opportunity to correct address information.

2. **Multiple Mailing Strategy**

The Census Bureau used a mail strategy consisting of multiple contacts for Census 2000 in mailout/mailback areas. These contacts were:

- An advance notice letter to every mailout address that alerted households that the census form would be sent to them soon
- A questionnaire to every mailout address
- A postcard to every mailout address that served as a thank you for respondents who had mailed back their questionnaire or as a reminder to those who had not

This multiple mailing strategy used first-class postage for all mailing pieces in mailout/mailback areas. The volume for mailout/mailback areas was approximately 100 million pieces for each mailing.

There was also a mailout strategy used in update/leave areas for reminder postcards and advance notice letters. Advance notice letters were mailed to update/leave housing units that had "good" addresses using first-class mail. Reminder cards were sent to housing units in ZIP codes that consist entirely of update/leave housing units. Those cards were sent to "Residential Customer" and delivered using third-class postage. Consequently, some housing units received the advance notice letter and not the reminder card, some received the reminder card and not the advance notice letter, some received both, and some received neither. The expected volume for update/leave areas was about 22 million questionnaires.

3. **Key Dates in Mailback Schedule**

Mailout/Mailback Enumeration Areas:

Event	Date
Advance notice letter delivered	3/06 - 3/08
Mailout of Questionnaire	3/13 - 3/15
Delivery of Reminder Cards	3/20 - 3/22
Census Day	4/01

Cut for Nonresponse Followup (NRFU)	4/11
Late Cut for NRFU	4/18

Update/Leave Enumeration Areas:

Event	Date
Delivery of Advance Notice Letters	3/01 - 3/03
Delivery of Questionnaires	3/03 - 3/30
Delivery of Reminder Cards	3/27 - 3/29
Census Day	4/01
Cut for NRFU	4/11
Late Cut for NRFU	4/18

4. **Delivery of Questionnaires in Other Languages**

The Census Bureau mailed census forms in five other languages (Chinese, Korean, Spanish, Tagalog, and Vietnamese) to housing units that requested them. The advance notice letter provided the respondent with the opportunity to make this request.

IV. QUESTIONS TO BE ANSWERED AND METHODOLOGY

1. What were the return rates according to...
   ...form type (long vs. short)?
   ...type of enumeration area (TEA)?
   ...tract? (Return rates for every single tract will be calculated and distributions of return rates or averages according to larger levels of geography will be included in the evaluation report.)
   ...state (including Puerto Rico)?
   ...county?
   ...certain combinations of these characteristics?

a. Methodology

Return rate refers to the number of occupied housing units with corresponding questionnaires checked in by the time of the late cut for NRFU that are not blank over the number of occupied housing units that were in the mailback universe, expressed as a percentage rounded to the nearest tenth percentage point. Those non-blank questionnaires can come in the form of an actual mail return questionnaire, a Be Counted Form (BCF), an internet return, or a response via Telephone Questionnaire Assistance (TQA). All instances of "return rate" correspond to the definition of "Census 2000 Return Rate" as presented in Decennial

Statistical Studies Division (DSSD) Census 2000 Procedures and Operations Memorandum Series #L.

The source of data for answering this question is the Hundred percent Census Edited File with the reinstated housing unit IDs (HCEF_D'). Each housing unit with a final status of occupied that is in the mailout/mailback or update/leave universe has a corresponding record on that file with a distinct Decennial Master Address File (DMAF) twelve digit identification (ID). Also available on that file are fields for each housing unit detailing the form type delivered, the type of enumeration area, the LCO, the collection census tract, the state, the county, and the date on which a mail return was checked in at a DCC. These variables names are **MAFID**, **ASAM**, **TEA**, **TRACT**, **ST**, **COU**, and **MAILD**, respectively. Additionally, the variable **NPHU** will be used to indicate if the housing unit has a final status of occupied. If **NPHU**=0, then a housing unit is vacant. A housing unit with a value greater than zero was occupied on Census Day. More detailed descriptions of these variables with possible values are in Attachment 1.

Occupied housing units added during update/leave that were provided with a mailback questionnaire will be included. The mail return check-in month and day variable (**MAILD**) will indicate if a given housing unit had a corresponding mail return check-in by the time of the late cut for NRFU. The number of persons in housing unit variable from the HCEF_D' (**NPHU**) determines if the housing unit should be counted as part of the return rate.

The denominator for a given return rate is determined using a multiple step process.

First, we generate a base universe consisting of distinct housing units according to the variables on the HCEF_D' that correspond to the elements posed in the question above (form type, TEA, collection tract, state, and county).

A given housing unit must satisfy:

TEA = 1 *or* 2 *or* 6 *or* 7 *or* 9
AND
NPHU > 0

in order to qualify for a return rate denominator, and it can of course be restricted to certain values of these when studying return rates for certain TEAs.

For example, suppose that we wish to obtain the return rate for all mailout/mailback housing units in the state of Texas that received the long form. The base for our denominator would be those housing units that satisfy: **ST** = 48, **TEA** = 1, **NPHU** > 0, and **ASAM** = 6.

Given the base for the denominator, certain housing units must be excluded. We also wish to exclude those housing units in mailout areas for which the address information was pre-identified as incomplete, as these housing units did not receive a mailout/mailback questionnaire. These housing units are described by variables **TEA** and **UAA**. (**UAA** is described in further detail in Attachment 1.)

We wish to exclude a housing unit from the return rate denominator if

TEA = 1 *or* 6
AND
UAA = 8.

Also, it is necessary to exclude all housing units from the mail return rate denominator that were never successfully delivered by either USPS or Census Bureau staff. Any housing unit will be excluded from the return rate denominator if

UAA = 1 *or* 2 *or* 3 *or* 4 *or* 6 *or* 7.

Two variables for determining the mail return rate denominators are not available on the HCEF_D'. These are the MAF action code (**MAC**) variable and the Delivery Sequence File (**MSDF**) variables from the Decennial Master Address File (**DMAF**). Using **MAFID**, these variables will be merged onto the HCEF_D' records. Information on these two variables can be found in Attachment 2.

Given the base for the denominator, certain housing units must be excluded. These are the housing units that initially were added to the DMAF in operations following the mailout. By definition, these housing units cannot be included in the UAA rates since no attempt was made to deliver questionnaires to them until after the mailout period.

We wish to exclude a housing unit from the UAA rate denominator unless the record for the address was added, corrected, moved to a new block, verified, or edited in one of the following operations that occurred prior to Nonresponse Followup:

- Address Listing
- Block Canvassing
- Local Update of Census Addresses (LUCA) 98
- LUCA 98 Field Verification
- LUCA 99 Relisting
- LUCA 98 Appeals
- LUCA 99 Appeals
- Update/Leave Questionnaire Delivery
- Urban Update/Leave Questionnaire Delivery
- 1990 Address Control File
- Dress Rehearsal-specific operations
- 11/97 (or earlier) Delivery Sequence File (DSF)
- 09/98 DSF
- 11/99 DSF

Finally, any addresses that were deleted by enumerators during U/L or UU/L questionnaire delivery will be excluded from the return rate denominator. This means that if the questionnaire delivery MAF action code (**MAC**) variable equals D and **TEA** = 2 *or* 7 *or* 9 then the housing unit is excluded.

Once the denominator is set, the return rate numerator can be determined. A housing unit qualifies for the numerator if it is a member of the denominator and it satisfies

[**MAILD** $\leq$ 0418 *and* (**MAILD** $\neq$ 0000 *or* 0099)].

Return rates will be calculated by dividing the numerator by the denominator, multiplying by 100, and rounding to the nearest tenth percentage point.

The results for the varied return rates will most likely be presented in table format.

b. Limitations

Some housing units on the HCEF_D' from mailout/mailback and update/leave areas that have a final status of occupied were added after the

mailback universe is set. Hence, they are being counted toward the return rate denominator but did not have a chance to respond by mailback equivalent means prior to the late cut for NRFU. Resolution of this might be attempted by merging the HCEF_D' with the DMAF and trying to remove these housing units from consideration.

Additionally, a housing unit should be counted toward the numerator if **MAILD** indicates a check-in date prior to the late cut for NRFU. At this time that date is set at April 18, 2000. Users of the rates should keep in mind that there will be some noise in the data with respect to the date since the NRFU universe must be generated on a flow basis. That is, the NRFU universe of all the housing units is not set instantaneously at midnight of April 18. The actual cut might fall on either side of that date for some housing units.

c. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

The DSCMO will produce the HCEF_D' and make it available to DSSD. The DSSD will be responsible for creating appropriate extracts and computing return rates.

2. What was the pattern of return of completed questionnaires from occupied housing units according to check-in date and for each form type?

a. Methodology

In order to answer the question of when occupied housing units returned completed questionnaires, the mail return check-in month and day variable will again be used. This is simply a matter of subdividing the results of question one according to specific **MAILD** values.

The DSSD will generate bar graphs (national, state, etc.) that illustrate the number of questionnaires checked in during each day of the mailback

process and through the late cut for NRFU, which is dependent on the site in question. Data for long form, short form, and all questionnaires will be shown separately. The DSSD will also create line graphs demonstrating the cumulative effect on return rates from the questionnaires that are checked in during the mailback process.

Another measure of when questionnaires were returned will be presented in table format. These tables will indicate the cumulative return rate at various times in the mailback process. For example, for mailout/mailback areas we might list the cumulative return rate one week after the questionnaire delivery, two weeks after questionnaire delivery, etc.

b. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

The DSCMO will produce the HCEF_D' and make it available to DSSD. The DSSD will be responsible for creating appropriate extracts and tallying check-in data.

3. Was there a difference between long and short forms for the rate of mailback from occupied housing units?

a. Methodology

To determine if there is a disparity between the rates of short form and long form check-in from occupied housing units, DSSD will create the graphs and tables associated with questions one and two according to form type to observe any possible variation.

b. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

The DSCMO will produce the HCEF_D' and make it available to DSSD. The DSSD will be responsible for creating appropriate extracts and tallying check-in data.

4. Did respondents from occupied housing units exhibit a tendency to hold completed forms until close to Census Day?

a. Methodology

Determining if respondents from occupied housing units tended to hold their forms until Census Day will be done by looking for a relative surge in check-in immediately after April 1. This can be ascertained using the data produced for question two.

b. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

DSCMO will produce the HCEF_D' and make it available to DSSD. DSSD will be responsible for creating appropriate extracts and tallying check-in data.

5. Does there seem to be a surge in response from occupied housing units after the mailout of the reminder postcard for the appropriate enumeration areas?

a. Methodology

By examining check-in rates from occupied housing units immediately after the scheduled delivery of the reminder card (3/20 - 3/22 for

mailout/mailback areas and 3/27 - 3/29 for update/leave areas), DSSD will determine if the reminder card created a lift in response. Results from question two will be used to answer this question.

b. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

The DSCMO will produce the HCEF_D' and make it available to DSSD. The DSSD will be responsible for creating appropriate extracts and tallying check-in data.

6. What was the pattern of check-in of questionnaires from occupied housing units between the initial cut for NRFU and the late cut for NRFU?

a. Methodology

Again, we will use the check-in date field (**MAILD**) to see how many occupied housing units had a corresponding mail return checked in between the cut for NRFU (4/11) and the late cut for NRFU (4/18). These occupied housing units were initially assigned for NRFU but needed to be removed. Results for this question are also an extension of the results for question two.

The DSSD will generate bar graphs (national, state, LCO, etc.) that illustrate the number of questionnaires checked in during this time window. The DSSD will also create line graphs demonstrating the cumulative effect on return rates from the questionnaires that are checked in during the time between the two cuts.

b. Limitations

As mentioned previously, users of the results from this study should keep in mind that there will be some noise in the data with respect to the two cut dates since the NRFU universe must be generated on a flow basis.

The actual cuts might fall on either side of the April 11 and April 18 dates for some housing units.

c. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

The DSCMO will produce the HCEF_D' and make it available to DSSD. The DSSD will be responsible for creating appropriate extracts and tallying check-in data.

7. What was the pattern of check-in of questionnaires from occupied housing units after the late cut for NRFU?

a. Methodology

Check-in date (**MAILD**) will also be used to identify occupied housing units which had a corresponding mail return checked in after the late cut for NRFU. These occupied housing units were not counted toward the return rate and were scheduled for visitation by a NRFU enumerator.

The DSSD will generate bar graphs (national, state, LCO, etc.) that illustrate the number of questionnaires checked in after the late cut. The DSSD will also create line graphs demonstrating the cumulative effect on return rates -- in the theoretical scenario that they could be calculated without a date restriction -- from the questionnaires that are checked in during the time after the late cut.

b. Limitations

Again, users of the results from this study should keep in mind that there will be some noise in the data with respect to the late cut date since the NRFU universe must be generated on a flow basis.

c. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

The DSCMO has produced the HCEF_D' and made it available to DSSD. The DSSD will be responsible for creating appropriate extracts and tallying check-in data.

8. How much of an improvement over response rates were the return rates?

a. Methodology

Since response rate denominators include vacant and deleted housing units that were in the original mailback universe and return rate denominators do not, the return rate generally exhibits an increase over the response rate. At relatively small levels of geography, the return rate is sometimes lower than the response rate. A couple of examples of situations that can cause this phenomenon are landlords' sending back questionnaires on behalf of vacant housing units and the return of questionnaires corresponding to seasonal or vacation residences.

The DSSD will perform this comparison by using the response rates found in the "Study of Census 2000 Mail Response Rates." The return rate results for question one in this study plan and the response rate results from question one of the other study plan have identical geographical stratifications. The DSSD will calculate the differences between the response and return rates according to these same strata, though the level of detail presented in the corresponding results for this question might be slightly less. These results will be presented in table format.

b. Processing Requirements

(1) Clerical

None.

(2) Keying

None.

(3) Programming and Computer

Answering this question depends upon completion of the response rate study plan. This is the responsibility of DSSD.

9. What were the return rates for occupied housing units according to...
...tenure of the housing unit (owned vs. rented)?
...number of occupants for the housing unit?
...Hispanic origin of the householder?
...race of the householder?
...age of the householder?
...household composition?

a. Methodology

For each housing unit on the Hundred percent Census Edited File (HCEF) with a final status of occupied, these four items are available. (Every occupied housing unit has a designated householder.) These return rates can be computed using the same geographical dividers found in question one, but the results for this question will also probably not be quite as detailed. The HCEF must be used rather than the HCUF so that imputed demographic data are available. Otherwise, some of the occupied housing units will not have tenure information, number of occupants, Hispanic origin of the householder, or race of the householder.

The variables of interest are **STENURE**, **NP**, **QSPAN**, and the multiple **QRACE** flags. Additionally, **QREL** must be used to identify the householder so that the proper person-level information is used for each housing unit. These variables are explained in more detail in Attachment 2, which lists their possible values.

Return rates are calculated in the same manner in which they were calculated for question one, but the denominators are restricted to certain categories of these variables.

Results will be presented in table format with a return rate listed for each category.

b. Processing Requirements

(1) Clerical

No extra work is required for this study plan.

(2) Keying

No extra work is required for this study plan.

(3) Programming and Computer

The DSCMO has produced the HCEF_D' and made it available to DSSD. The DSSD will be responsible for creating appropriate extracts and computing return rates according to the appropriate variables.

V. LIMITATIONS

Obviously the number of return rates and rates of check-in from occupied housing units that this study plan could potentially generate will be far more than we wish to document. The level of detail will be limited in some respect.

Response status from occupied housing units in this evaluation is based on check-in by DCC staff rather than the date that the form was actually completed or returned. Therefore, time lags in mail delivery to the DCCs and the timing of shifts for check-in impact the check-in date information.

Additionally, the difference between the check-in date and the date on which the form was sent by the respondent is not necessarily uniform. Processing delays at the DCCs and USPS delays could both be factors to different degrees in different areas and at different times.

VI. MILESTONE SCHEDULE

	Activity	Start Date	End Date
1.	Develop Study Plan	06/16/99	04/30/01
2.	Conduct Mailout/Mailback Operation	03/06/00	03/22/00
	Conduct Update/Leave Operation	03/01/00	03/29/00
	Conduct Questionnaire Check-In at the DCCs	03/06/00	05/15/00
3.	Delivery of the DMAF with Complete Mail Return Check-In Information		08/25/00
	Delivery of the HCUF		10/03/00
	Delivery of the HCEF_D'		11/29/00
	Delivery of Response Rates for Comparison with Return Rates (from A.7.a)		04/30/01
4.	Start Analysis	02/01/01	
5.	Start/End First Draft of Report	02/15/01	06/27/01
6.	Roundtable Presentation	01/27/01	
7.	Start/End Second Draft of Report	07/11/01	12/17/01
8.	Prepare Final Report for Signature	12/17/01	12/31/01
9.	Report is Issued		03/19/02

VII. RELATED STUDIES/OPERATIONS

A.7.a "Study of Census 2000 Mail Response Rates."

VIII. REFERENCES

Dimitri, C. Robert. "Documentation of 1990 Response and Return Rates", DSSD Census 2000 Procedures and Operations Memorandum Series #L-1 (revised), December 6, 1999.

Hogan, Howard. "Documentation of Response and Return Rates Definitions for Census 2000", Census 2000 Decision Memorandum No. 111, November 16, 2000.

Hogan, Howard. "Revision: Documentation of Response and Return Rates for the 2000 Dress Rehearsal and Census 2000", Census 2000 Decision Memorandum No. 65, December 2, 1998.

Attachment 1

HCEF_D' Variables and Values

From the Block Record (Record Type 1)

TEA — Type of Enumeration Area
- 1 = Mailout Mailback
- 2 = Update Leave
- 3 = List Enumerate
- 4 = Remote List Enumerate
- 5 = Update Enumerate
- 6 = Military in Update Leave Area
- 7 = Urban Update Leave
- 9 = Update Leave (converted from TEA 1)

LCO — Local Census Office Code

ST — Collection FIPS State Code

COU — Collection FIPS County Code

TRACT — Nonresponse Followup Tract

From the Housing Unit Record (Record Type 2)

MAFID — MAF and DMAF ID (Excluding the 2 Character Check Digit)
- Characters 1 - 2 = state code when the MAF ID was assigned
- Characters 3 - 5 = county code when the MAF ID was assigned
- Characters 6 - 12 = control ID

NPHU — Number of Persons at This Housing Unit
- 00 = None
- 01 - 97 = Persons at this housing unit

ASAM — A Priori Sample
- 1 = Short Form
- 6 = Long Form

FINST — Final Status of Unit
- 1 = Occupied
- 2 = Vacant
- 3 = Reinstated duplicate delete

MAILD — Mail Return Check-In Month And Day
- 0000 = No Mail Return Check-in
- 0099 = Reverse Check-in (When it is determined during the data capture process that a form doesn't contain enough data to be considered checked-in, MAILD is set to 0099)
- 0101 - 1231 = Check-in Day of 1st return

UAA Undeliverable As Addressed

0 = No UAA Check-in
1 = UAA check-in in NPC only
2 = UAA check-in in NPC, in LCO check-in, no LCO check-out
3 = UAA check-in in NPC, no LCO check-in, in LCO check-out
4 = UAA check-in in NPC, in LCO check-in, in LCO check-out
5 = No UAA check-in in NPC, in LCO check-in, no LCO check-out
6 = No UAA check-in in NPC, no LCO check-in, no LCO check-out
7 = No UAA check-in in NPC, in LCO check-in, in LCO check-out
8 = Not Enough Address Information -- Excluded from the Mailout

RSOURCE Source of Return (From DRF2 Processing)
See HCEF_D' documentation for possible values.

Attachment 2

DMAF Variables and Values from the MAF Status Files

MAC(17) MAF Action Codes

A = Add
C = Correction
D = Delete
M = Block Move
N = Nonresidential
U = Uninhabitable
V = Verify
E = Edit

The 17 Operations are -

(1) Address Listing
(2) Block Canvassing
(3) LUCA 98
(4) LUCA 98 Field Verification
(5) LUCA 99 Relisting
(6) LUCA 98 Appeals
(7) LUCA 99 Appeals
(8) Special Place/GQ
(9) Questionnaire Delivery (UL, UE, UUL, LE, or remote AK)
(10) Postal Validation Check
(11) Nonresponse Followup
(12) BeCounted Verfication
(13) TQA Verification
(14) Coverage Improvement
(15) New Construction
(16) 1990 ACF (A or blank)
(17) DR-Specific(PALS,TC,TMUC)

MSDF MAF DSF Flags

0 = Not indicated in the DSF
1 = Flagged as Residential in the Indicated DSF
2 = Flagged as Nonresidencial in the Indicated DSF

The 6 DSFs are -

(1) 11/97 or earlier
(2) 9/98
(3) 11/99
(4) 2/00
(5) 4/00
(6) unused